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DEPARTMENT OF TRANSPORTATION
NATIONAL TRANSPORTATION SAFETY BOARD
WASHINGTON, D.C. 20591

OFFICE OF
THE CHAIRMAN

June 25, 1970

Honorable John H. Shaffer
Administrator
Federal Aviation Administration
Washington, D. C. 20590

Dear Mr. Shaffer:

Our investigation of the Piper PA-30, N8701Y, accident at Topeka, Kansas, on September 7, 1969, indicates that total aircraft electrical power failure contributed to the cause of the accident. An electrical fault occurred in the No. 1 alternator, resulting in a short circuit of both the No. 1 and No. 2 alternator fields, and total electrical power was eventually lost.

A study of the available records indicates that since July 1969, 13 other electrical faults were associated with the alternator on Piper aircraft models PA-23, PA-30, and PA-31. Three of these resulted in total electrical failure.

The Piper Aircraft Corporation issued Service Bulletin #306 on January 9, 1970, which modified the electrical system of PA-23, PA-30, and PA-31 model aircraft to assure more positive control of the system. With this modification, a faulty alternator can be isolated from the remainder of the system and thus prevent total electrical failure as experienced by N8701Y and others.

The Board considers this modification imperative for safety of flight under certain conditions. A failure of the electrical system, which results in the total loss of communication and navigation components when the aircraft is flying in IFR conditions, could be catastrophic. It is questionable whether the Service Bulletin has placed sufficient emphasis on the need for the modification and the inherent possible dangers. Therefore, the Board recommends that the Federal Aviation Administration consider making Service Bulletin #306 the subject of an Airworthiness Directive.

Members of our staff have consulted with your personnel in FS-130 and the Eastern Region on this subject and will be available for any assistance you may require.

Sincerely yours,

John H. Reed

John H. Reed
Chairman